

APPENDIX II

**AN ORDINANCE ESTABLISHING STORM DRAINAGE REQUIREMENTS
FOR STORM WATER CONTROL WITHIN THE TOWN OF WESTFIELD
IN THE COUNTY OF UNION AND STATE OF NEW JERSEY**

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§ 1. SHORT TITLE.

This ordinance shall be known and may be cited as the "Storm Water Control and Flood Plain Ordinance of the Town of Westfield".

§ 2. PURPOSE AND POLICY.

It is hereby found that the rivers and streams within the Town of Westfield are subject to recurrent flooding, that such flooding endangers life and damages public and private property and facilities, that this condition is aggravated by development and encroachments in the flood plain; that such development can contribute to the condition by increasing local storm water runoff and erosion, and that the most appropriate method of alleviating such condition is through regulation of such development and encroachment. It is, therefore, determined that the special and paramount public interest in the control of storm water drainage justifies the regulation of land use located in the flood plain and regulation of storm water drainage for the entire municipal area, as provided in this ordinance which is in the exercise of the police power of the municipality, for the protection of the persons and property of its inhabitants, and for the preservation of the health, safety, and general welfare. Among the purposes of this ordinance are:

- A. to prevent loss of life;
- B. to protect public health and promote public safety and welfare;
- C. to minimize losses and damages to public and private property due to inundation and siltation caused by flood waters and storm water runoff;
- D. to prevent installation of structures and to restrict land uses which cause increases in flood heights and/or velocities, erosion, and siltation;
- E. to reduce public expenditures for emergency operations, evacuations and restorations;
- F. to prevent increase in the volume and rate of surface water runoff due to development;
- G. to prevent further unwise development in flood plains, thus reducing future expenditures for protective measures;

- H. to preserve, protect, and enhance the natural environment of the flood plains; and
- I. to prevent damage to transportation and utility systems.

§ 3. DEFINITIONS.

For the purpose of this ordinance, unless the context clearly indicates otherwise, the following word and phrases shall have the meanings respectively ascribed to them by this section:

- A. **Channel.** A watercourse with a definite bed and banks which confine and conduct continuously or intermittently flowing water.
- B. **Basement.** Any area of the building having its floor sub-grade (below ground level) on all sides.
- C. **Breakaway wall.** A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or supporting foundation system.
- D. **Elevated building.** A non-basement building which is:
 - 1. in the case of a building in a area of special flood hazard, built to have the top of the elevated floor elevated above the ground level by means of piling, columns (posts and piers), or shear walls parallel to the flow of the water, or, in the case of a building in a coastal high hazard area, built to have the bottom of the lowest horizontal structural member of the elevated floor elevated above the ground level by means of piling, columns (posts and piers), or shear walls parallel to the flow of the water; and
 - 2. adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood.

In an area of special flood hazard, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters. In an area of coastal high hazard, "elevated building" also included a building otherwise meeting the definition of "elevated building" even though the lower area is enclosed by means of breakaway walls.

- E. **Department.** The State Department of Environmental Protection, Division of Water Resources.

- F. **Encroachment.** Any obstruction within a delineated floodway.
- G. **Fill.** Sand, gravel, earth or other materials of any composition whatsoever, placed or deposited by any person or persons which alter the natural contour of the land.
- H. **Flood damage potential.** The susceptibility of a specific land use at a particular site to damage by potential floods at the site, as well as increased off-site flooding or flood-related damages caused by such land use.
- I. **Flood fringe area.** That portion of the flood hazard area outside of the floodway.
- J. **Flood hazard area.** The flood plain based on the total area inundated during the Flood of Record unless delineated by the Department, in which case the Department delineation shall govern.
- K. **Flood of record.** The greatest flood in a given area for which accurate records are available and as determined by the Department.
- L. **Flood plain.** For the purpose of this ordinance, the flood plain shall be the same as the flood hazard area.
- M. **Floodway.** The channel of a natural stream and portions of the flood plain adjoining the channel which are reasonably required to carry and discharge the flood water or flood flow of any natural stream. The floodway shall be delineated by the Department. If the floodway has not been officially delineated, it shall be based on encroachment lines established by the Department, with additional width for access and maintenance.
- N. **Hazardous materials.** Including, but not limited to, inorganic mineral acids of sulfur, fluorine, chlorine, nitrogen, chromium, phosphorous, selenium, and arsenic, and their common salts; lead, nickel, and mercury and their inorganic salts or metholo-organic derivatives and coal tar acids, such as phenols and cresols, and their salts.
- O. **Lowest floor.** The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for the parking of vehicles, building access or storage in an area other than basement is not considered a building's lowest floor provided that such enclosure is not built so to render the structure in violation of other applicable non-elevation design requirements.
- P. **Manufactured home.** A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For flood plain management purposes the

term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than one hundred and eighty (180) consecutive days. For insurance purposes the term "manufactured home" does not include park trailers, travel trailers and other similar vehicles.

- Q. **Manufactured home park or manufactured home subdivision.** A parcel or contiguous parcels of land divided into two or more manufactured home lots for rent or sale.
- R. **Obstruction.** Any material which may obstruct the flow of water, including, but not limited to, any structure, fill, excavation, channel modification, rock, gravel, refuse or material in, along, across, or projecting into any channel, watercourse, or flood hazard area which may impede, retard, or change the direction of the flow of water either by itself or by catching or collecting debris carried by such water, or which is so placed that the flow of water might carry the same downstream to the damage of life or property.
- S. **Percolation test.** A test designed to determine the ability of ground to absorb water, performed by a licensed professional engineer with proven competency in the field of soils engineering, and carried out in accordance with acceptable engineering standards and practices. A detailed report of the test, when required, shall be submitted to the Planning Board and Town Engineer for review.
- T. **Permitted use.** Any use which shall be allowed subject to the provisions of this ordinance, and shall require a "permitted use" permit.
- U. **Person.** Corporation, companies, associations, societies, firms, partnerships, and joint stock companies, as well as individuals, the State, and all political subdivisions of the State and any agencies or instrumentalities thereof.
- V. **Pesticide.** Any substance or mixture of substances labeled, designed, intended for or capable of use in preventing, destroying, repelling, sterilizing or mitigating any insects, rodents, nematodes, predatory animal, fungi, weed and other forms of plant or animal life or viruses, except viruses on or living in man or other animals. The term "pesticide" shall also include any substance or mixture of substances labeled, designed or intended for use as a defoliant, desiccant, or plant regulator.
- W. **Prohibited use.** Any use which shall not be allowed under any circumstances.
- X. **Rainfall excess.** The portion of rainfall which becomes direct surface runoff.

- Y. **Restricted use.** Any use which requires a "restricted use" permit.
- Z. **Start of construction.** For other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. 97-348), includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within one hundred and eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site such as the pouring of a slab or footings, the installation of poles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling nor does it include the excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation of the property of accessory buildings, such as garages or shed not occupied as dwelling units or not part of the main structure.
- AA. **Stream encroachment permit.** A permit issued by the Department under the provision of N.J.S.A. 58:1-26.
- BB. **Storm water detention.** Any water storm drainage technique which retards or detains runoff, such as a detention basin, parking lot storage, rooftop storage, or any combination thereof.
- CC. **Structure.** Any assembly of materials above or below the surface of land or water, including, but not limited to buildings, fences, dams, berms, levees, bulkheads, dikes, jetties, embankments, wharves, piers, docks, landings, obstructions, pipelines, causeways, culverts, roads, railroads, bridges, and the facilities of any utility or municipality.

§ 4. GENERAL REQUIREMENTS.

- A. **Site plans generally.** No construction or development shall take place within the municipal boundaries unless a site plan and any other required information shall have been submitted to the Planning Board for its review and approval. Such site plan shall be drawn to a scale which is not smaller than one (1) inch equals fifty (50) feet, and shall show, in addition to the information required under other ordinances, the following information:
1. existing and proposed principal buildings or structures and all accessory buildings or structures, if any;

2. the proposed finished grade elevations at the corners of any structure or structures;
3. existing topography and proposed grading at contour intervals of two (2) feet or less;
4. the lowest elevation within any proposed structure after its completion;
5. the location, type and size of all existing and proposed storm drainage facilities, and other utilities servicing and to service the premises in question;
6. the location, size and nature of all existing and proposed drainage rights-of-way or easements and the location, size, and description of any lands to be dedicated to the municipality or County;
7. the layout and size of existing and proposed public streets;
8. the elevation of any existing or proposed pumping facilities;
9. the nature and extent of any existing or proposed construction, alterations or repairs;
10. the location of the proposed and existing buildings on the site;
11. the ownership, location, size and nature of the entire lot or lots in question and any contiguous lots owned by the applicant or owner or in which the applicant or owner has a direct or indirect interest;
12. stream encroachment lines, if any, established by the State Department of Environmental Protection, Division of Water Resources and the flood hazard area, if any;
13. the extent of the filling of the land, if any;
14. the location, size and type of all existing and proposed erosion and siltation control measures, such as slope protection, soil stabilization, sedimentation basins, sediment traps, headwalls, aprons, and the like to be used during the construction phase and as permanent installations;
15. where required by the Planning Board, information relating to subsurface conditions, based on percolation tests, soil borings or probes; and
16. any and all other information and data necessary to meet any of the requirements of this ordinance.

- B. **Review by the Planning Board.** In reviewing any proposed construction or development, the Planning Board shall be reasonably assured that any structure, when built or altered can be occupied or used without peril to the health or safety of the occupant and that the proposed land use:
1. has an inherently low-flood damage potential;
 2. either acting alone or in combination with existing or future uses, does not obstruct flood flows or increase flood heights and/or velocities;
 3. does not affect adversely the water-carrying capacity of any delineated floodway and/or channel;
 4. does not increase local runoff and erosion;
 5. does not unduly stress the natural environment of the flood plain or degrade the quality of surface water or the quality and quantity of ground waters;
 6. does not require channel modification or relocation; and
 7. provides adequate safeguards prior to and during construction by the use of dikes, berms, pumps, drains or other means to assure that surrounding land is protected from erosion, siltation or excessive water runoff.
- C. **Prohibited acts.** No land area shall be developed by any person so that:
1. the volume and/or rate of storm water runoff occurring at the area is increased over what occurs there under conditions existing prior to such development;
 2. the drainage of adjacent areas is adversely affected;
 3. the soil erosion during and after development is increased over that which occurs there under conditions existing prior to such development;
 4. soil absorption and ground water recharge capacity of the area is decreased below that which occurs there under conditions existing prior to such development; and,
 5. the natural drainage pattern of the area is significantly altered.

D. **Regulation and control methods.** In order to duplicate as nearly as possible natural drainage conditions, regulation and control of storm water runoff and erosion for any land area to be developed shall be through on-site storm water detention systems which shall be limited to the following:

1. detention areas, which may be depressions in parking areas, excavated basins, basins created through use of curbs, stabilized earth berms or dikes, or any other form of grading which serves to temporarily impound and store water;
2. rooftop storage, through temporary impoundment and storage of storm water on flat or slightly pitched building rooftops by use of drain outlets which restrict the storm water runoff from the roof surface; and
3. any combination of the above-mentioned techniques which serves to limit storm water runoff from a given site to that which presently occurs there.

E. **Design, installation and maintenance of detention facilities.**

1. Storm water detention facilities shall be designed to contain an amount of storm water equal to the increase in proposed development of a site. The volume of rainfall excess will be calculated by use of the "Urban Hydrology for Small Watersheds" Technical Release No. 55 by the U.S. Department of Agriculture, dated January 1975 or as may be amended. The rainfall excess for each situation will be calculated for the time lag factors by utilizing the one hundred (100) year rainfall intensity chart for the Westfield area. This chart, available from Westfield Engineering Division, is a composite of the New York, New York and Sandy Hook, New Jersey rainfall intensity charts. Soil drainage characteristics are as identified by the Robert Catlin Plan of Westfield entitled "Soil Drainage" available at the Westfield Engineering Division.
2. All engineering data and computations upon which the design of proposed storm water detention facilities is based, or upon which the applicant has determined that no storm water detention facility is required, shall be submitted to the Town Engineer for review.
3. Detention facilities shall provide sufficient volume to fully contain the total volume of rainfall excess. The outlets of such facilities shall be designed to limit the minimum discharge rate of storm water to that which occurs at the site under existing conditions, and shall discharge in such a way as not to affect any other property. If rooftop storage is proposed, proper support of the weight

of the impounded water on the roof shall be provided for in the structural design of the building, and the roof shall be designed to provide maximum protection against leakage. If earth berms or dikes are used to create the impounding area, they shall be adequately stabilized and the slopes shall be protected with vegetative cover, paving or rip-rap to protect against failure or breaching.

4. Storm water detention facilities shall be maintained regularly by the owner to insure continued functioning of the systems at design capacity and to prevent the health hazard associated with debris build-up and stagnant water. In no case shall water be allowed to remain in any storage facility long enough to constitute a mosquito breeding, disease, or any other type of health problem.
5. Permitted detention and sediment and erosion control facilities shall be designed to conform with the "Standards for Soil Erosion and Sediment Control in New Jersey", published by the State Soil Conservation Committee and administered by the Somerset-Union Soil Conservation District, except where the Town Engineer has determined that conditions peculiar to a certain site require imposition of standards which are more restrictive than those therein contained.
6. In accordance with the New Jersey Soil Erosion and Sediment Control Act of 1975, sediment and erosion control measures shall be installed prior to any other site development, shall apply to all aspects of the proposed development, and shall be in operation during all stages of development. Increased runoff and sediment resulting from modified soil and surface conditions caused by the proposed development shall be minimized and, where possible, retained on site.

F. **Situations where the provisions of this ordinance do not apply.**
The provisions of this ordinance insofar as they relate to storm water detention facilities only shall not apply to the following:

1. All applications for building permits for construction of or conversion to one or two family residences, or buildings or uses accessory thereto; except that such exclusion shall not apply where the building lot to which such application relates constitutes part of a development of more than two (2) such lots, owned by the same applicant or owner or in which the same applicant or owner has a direct or indirect interest.

2. All applications for residential subdivision which will result in the creation of not more than two (2) one or two family building lots. In all cases where the development is excluded from the requirements of this ordinance as provided herein, the Construction Official shall require the developer to install adequate facilities, such as dikes, berms, pumps, piping, etc., prior to the commencement of construction to insure that areas surrounding the development are protected from erosion, siltation or excessive water runoff and shall further require that these facilities be properly maintained during development. No development shall be excluded from the provisions of this ordinance as they apply to the flood hazard area and this section shall not operate to exclude any type of development or use from the restrictions imposed by this ordinance for development in or use in the flood hazard area.

§ 5. DEVELOPMENT AND USE OF LAND LOCATED IN THE FLOOD HAZARD AREA.

A. Preservation of natural land.

1. It is hereby found that natural flood plains display complex intimate relationships among streams, periodic flooding, soils, vegetation, fish and wildlife and that periodic flooding of lowland areas, marshes and swamps adjacent to stream channels produces a rich physical-chemical environment for many living organisms. It is further found that flood plains contain biological communities which are among the most productive of natural systems and perform the following functions essential to the natural environment:
 - a. passage and storage of storm floodwaters;
 - b. removal of sediment loads from streams through deposition;
 - c. replenishment of ground water supplies through soil infiltration;
 - d. dissipation of energy of flood flows, thereby reducing downstream destruction; and
 - e. provision of areas of recreational and aesthetic pleasure.
2. Because of the importance of the natural flood plain as cited above, all natural land within any delineated floodway, except for land to be developed as a permitted use or restricted use in accordance with this ordinance, shall be preserved in its natural state and, where possible, developed land within the floodway shall be restored to its natural state.

B. Permitted land uses.

1. For purposes of this ordinance, permitted uses are land uses which have an inherent low flood damage potential and which do not:
 - a. require fill or the erection of structures;
 - b. require channel modification or relocation;
 - c. obstruct flood flows;
 - d. increase local runoff and/or erosion;
 - e. reduce ground absorption of storm water;
 - f. require equipment or material storage;
 - g. adversely affect the water carrying or storage capacity of any channel, floodway, or flood plain; nor
 - h. cause degradation of water quality and/or the natural environment.
2. Permitted uses include, but are not limited to, the following:
 - a. agriculture: general farming, pasture, grazing, outdoor plant nurseries, horticulture, viticulture, truck farming, forestry, sod farming, and wild crop harvesting;
 - b. private and public recreation: golf courses, tennis courts, basketball courts, baseball fields, other playing fields, driving ranges, archery ranges, picnic grounds, boat launching ramps, parks, wildlife and nature preserves; and
 - c. residential: lawns, gardens, parking areas, and play areas.
3. No person shall engage in a permitted use within a delineated flood hazard area until he has received approval by the Planning Board, a "permitted use" permit from the Construction Official, and a stream encroachment permit issued by the Department. The Planning Board shall notify the general public by advertisement in the official newspaper of the Town of Westfield and shall notify the governing bodies and environmental commissions, if any, of other municipalities which may be affected by the proposed use by letter that an application for a permitted use is pending. Such notification shall include the name and

address of the applicant, the location of the proposed use, and abbreviated description of the proposed use, an announcement as to where and at what times the complete application may be reviewed, and to whom and by what date interested parties may communicate their positions concerning the application and any data that may have developed in reference to the effects of the proposed use, and the date of a scheduled public hearing on the application. The Planning Board shall hold a public hearing on such application. Said notification and publication shall be at least ten (10) days prior to such hearing. The Planning Board shall review the permitted use permit application and all information received from interested parties and any testimony or evidence adduced at the public hearing. The Planning Board shall approve a permitted use permit only if it finds that the proposed use:

- a. has low flood damage potential;
- b. either acting alone or in combination with existing or future uses does not obstruct flood flows or increase flood heights and/or velocities;
- c. does not affect adversely the water carrying capacity of any delineated floodway and/or channel;
- d. does not increase local runoff and/or erosion; and
- e. does not unduly stress the natural environment of the flood plain or degrade the quality of surface water or the quality of ground water.

C. Restricted uses.

1. For purposes of this ordinance, restricted uses are land uses within the flood hazard area which involve:
 - a. structures (temporary and permanent);
 - b. fill;
 - c. storage of materials or equipment;
 - d. channel modification and/or relocation; and/or
 - e. extraction of sand, gravel and other materials.
2. Restricted uses, in addition shall include, but are not limited to the following, to the extent that they are not prohibited by any other local ordinances or State statute, rule or regulation:

- a. all uses listed under Section B, "Permitted uses", which also involve the factors in Section C.1 above;
 - b. railroads, streets, bridges, utility transmission lines and associated facilities, and pipelines; and,
 - c. storage yards.
3. No person shall engage in a restricted use within a delineated flood hazard area until he has received approval by the Planning Board, a "restricted use" permit from the Construction Official and a stream encroachment permit issued by the Department. The Planning Board shall notify the general public, by advertisement in the official newspaper of the Town of Westfield and shall notify the governing bodies and environmental commissions, if any, of other municipalities which may be affected by the proposed use by letter that an applicant for a restricted use is pending. Such notification shall include the name and address of the applicant, the location of proposed use, an abbreviated description of the proposed use, an announcement as to where and at what times the complete application may be reviewed, and to whom and by what date interested parties may communicate their positions concerning the application and any data that they may have developed in reference to the effects of the proposed use, and the date of a scheduled public hearing on said application. The Planning Board shall hold a public hearing on such application. Said notification and publication shall be at least ten (10) days prior to such hearing. The Planning Board shall review the restricted use permit application and all information received from interested parties and any testimony or evidence adduced at the public hearing. The Planning Board shall approve a restricted use permit only if it finds that the proposed use:
 - a. has low flood damage potential;
 - b. either acting alone or in combination with existing or future uses does not obstruct flood flows or increase flood heights and/or velocities;
 - c. does not affect adversely the water carrying capacity of any delineated floodway and/or channel;
 - d. does not increase local runoff and/or erosion; and

- e. does not unduly stress the natural environment of the flood plain or degrade the quality of surface water or the quality and quantity of ground water.
4. In reviewing the permit application and arriving at findings, the Planning Board shall consult with the Town Engineer and consider the following criteria:
- a. the danger to life and property due to increased flood heights or velocity caused by encroachments;
 - b. the danger that materials may be swept onto other lands or downstream to the injury of others;
 - c. the proposed water supply and sanitation systems and the insulation of these systems from disease, contamination and unsatisfactory conditions resulting from flooding;
 - d. the susceptibility of the proposed use to flood damage and the effects of such damage;
 - e. the need for a waterfront location;
 - f. the availability of alternate locations not subject to flooding;
 - g. the duration, rate of rise and sediment transport of flood waters expected at the site;
 - h. the safety of access to the property in times of flooding for ordinary and emergency vehicles;
 - i. the extent to which the hydraulic capacity of the floodway will be disrupted;
 - j. the degree to which any aspect of the food chain or plant, animal, fish or human life processes are affected adversely within or beyond the proposed use area;
 - k. the degree to which the proposed use serves the general public health, safety and welfare;
 - l. the degree to which the proposed activity alters natural water flow or water temperature;
 - m. the degree to which the proposed use provides facilities for the proper handling of litter, trash, refuse, and sanitary and industrial waste;
 - n. the degree to which irreplaceable land types will be destroyed;

- o. the degree to which the natural, scenic and aesthetic values at the proposed activity site can be retained; and
 - p. the degree to which materials not subject to major damage by floods are firmly anchored to prevent flotation and/or are readily removable from the area within the time available after flood warning.
- 5. If the Planning Board finds that the proposed use would violate or tend to violate the purposes and intent of this ordinance, it shall deny the application or may approve the application and impose such permit conditions as are necessary to meet the purposes and intent of this ordinance, and thereby promote the public and private property, wildlife and fisheries, and preserve, protect, and enhance the natural environment of the flood plain. These conditions may include, but are not limited to, the following:
 - a. modification of waste disposal and water supply facilities;
 - b. imposition of operational controls, sureties and deed restrictions;
 - c. requirements for construction of storm water detention facilities, channel modifications, dikes, levees and other protective measures;
 - d. installation of an adequate flood warning system; and
 - e. postponement of development until such time as protective measures are installed or until the floodway and flood hazard area have been delineated by the Department.
- 6. Where applicable, the Planning Board shall condition restricted use permits as follows:
 - a. Fill shall be no lower than one (1) foot above the flood hazard design elevation and shall extend at such height for a distance of at least fifteen (15) feet beyond the limits of any structure erected thereon.
 - b. Structures on fill shall be built so that the first floor and/or basement are at a minimum of one (1) foot beyond the limits of any structure erected thereon.

- c. Structures not placed on fill shall be otherwise elevated so that the first floor is at a minimum of one (1) foot above the flood hazard design elevation or shall be flood-proofed as set forth in paragraph d. below. Flood-proofing alone shall not be adequate for residences, nursing homes, schools, day care centers and similar uses.
- d. Flood-proofing measures shall be consistent with the flood protection elevation for the particular area, flood velocities, durations, rates of rise, hydrostatic and hydrodynamic forces, and other similar factors. The Planning Board shall require the applicant to submit a plan or document certified by a registered engineer that the flood proofing measures are consistent with the flood hazard design elevation and associated flood factors. Any or all of the following flood-proofing measures may be required:
 - (1) anchorage to resist flotation and lateral movement;
 - (2) installation of watertight doors, bulkheads and shutters or similar devices;
 - (3) reinforced walls to resist water pressure;
 - (4) use of membranes or mortars to reduce seepage of water through walls;
 - (5) addition of weight to structures to resist flotation;
 - (6) installation of pumps to lower water levels in structures;
 - (7) construction of water supply and waste treatment systems in a manner which prevents the entrance of flood waters;
 - (8) pumping facilities, or comparable measures, for the subsurface drainage systems of buildings to relieve external foundation wall and basement flood pressures;
 - (9) construction that resists rupture or collapse caused by water pressure or floating debris;
 - (10) installation of valves or controls on sanitary and storm drains which will permit the drains to be closed to prevent backup of sewage or storm waters into the structure. Gravity drainage of basements may be eliminated by mechanical devices;

- (11) location of all electrical equipment, circuits and installed electrical appliances in a manner which will assure they are not subject to inundation and flooding;
- (12) storage facilities for chemicals, explosives, buoyant materials, flammable liquids or other toxic or hazardous materials shall be situated above the flood hazard design elevation and shall be flood-proofed to prevent flotation of storage containers or damage to storage containers which could result in the escape of toxic materials into the flood waters; and
- (13) use of construction materials which are resistant to water damage.

D. Pre-existing structures and uses (non-conforming uses).

- 1. Structures or land uses which existed on or before the effective date of this ordinance may be permitted to continue subject to the following conditions:
 - a. If any pre-existing structure is destroyed by any means, including floods, to an extent of fifty (50) percent or more of its replacement cost at time of destruction, it shall not be reconstructed, except in conformity with the provisions of this ordinance.
 - b. No pre-existing structure shall be moved, altered, expanded, changed or enlarged unless a restricted use permit has been applied for and received. This provision does not apply to routine maintenance and repair, provided that such maintenance and repair does not increase the flood damage potential of the structure.
 - c. No pre-existing use of land or structures shall be modified so as to increase its flood damage potential, unless a restricted use permit has been applied for and received.
- 2. If actual construction of a structure is underway on or before the effective date of this ordinance, then such construction may be completed without a restricted use permit. Actual construction is hereby defined to include the placing of construction material in permanent position and fastened in a permanent manner. The provisions of paragraph 1. above shall apply to such structures upon completion of construction.

3. Structures in the floodway abandoned for six (6) consecutive months or longer and structures abandoned for twelve (12) consecutive months or longer in the flood fringe area after the effective date of this ordinance shall not qualify as pre-existing uses.

E. Prohibited uses.

1. Floodway. No person shall hereafter engage in, cause or permit other persons to engage in prohibited uses within a delineated floodway. The following uses shall be prohibited:
 - a. placing, depositing, or dumping any solid waste, garbage, refuse, trash, rubbish or debris;
 - b. dumping or discharging untreated domestic sewage or industrial wastes, either solid or liquid;
 - c. the storage or disposal of pesticides;
 - d. the storage or processing of materials that are in time of flooding buoyant, flammable or explosive;
 - e. the storage or processing of hazardous materials that could be injurious in time of flooding to human, animal or plant life; and
 - f. the erection of structures for human occupancy.
2. Flood fringe area. No person shall engage in, cause, or permit other persons to engage in prohibited uses within a delineated flood fringe area. The following uses shall be prohibited:
 - a. placing, depositing or dumping any solid waste, garbage, refuse, trash, rubbish, or debris;
 - b. dumping or discharging untreated domestic sewage or industrial wastes, either solid or liquid; and
 - c. the disposal of pesticides.

F. Specific construction methods.

1. All manufactured homes to be placed or substantially improved within an area of special flood hazard shall be elevated on a permanent foundation such that the top of the lowest floor is at or above the base flood elevation.
2. All manufactured homes shall be anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This

requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

3. Electrical, heating, ventilation, plumbing and air-conditioning equipment and other service facilities for all types of construction shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
4. For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood waters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
 - a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.
 - b. The bottom of all openings shall be no higher than one (1) foot above grade.
 - c. Openings may be equipped with screens, louvers, or other coverings or devices, provided that they permit the automatic entry and exit of flood waters.
5. When pilings or columns are used rather than fill to elevate the structure above the flood level, the following standards shall apply:
 - a. Elevation. All new construction and substantial improvements shall be elevated on pilings or columns so that the bottom of the lowest horizontal structural member of the lowest floor (excluding the piling or columns) is elevated to or above the base flood level, with all space below the lowest floor's supporting member open so as not to impede the flow of water, except for breakaway walls.
 - b. Structural Support.
 - (1) All new construction and substantial improvements shall be securely anchored on pilings or columns.

- (2) The pile or column foundation and structure attached thereto shall be anchored to resist flotation, collapse or lateral movement due to the effects of wind and water loading values, each of which shall have a one (1) percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).
 - (3) There shall be no fill used for structural support.
- c. Certification. A registered professional engineer or architect shall develop or review the structural design specifications and plans for the construction and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for compliance with the provisions of this ordinance.
- d. Space below the lowest floor.
 - (1) Any alteration, repair, reconstruction or improvement to a structure started after the enactment of this ordinance shall not enclose the space below the lowest floor unless breakaway walls, open wood lattice work or insect screening are used as provided for in this section.
 - (2) Breakaway walls, open wood lattice work or insect screening shall be allowed below the base flood elevation, provided that they are intended to collapse under wind and water loads without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system. Breakaway walls shall be designed for a safe loading resistance of not less than ten (10) and no more than twenty (20) pounds per square foot. Use of breakaway walls which exceed a design safe loading of twenty (20) pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:
 - (a) Breakaway wall collapse shall result from a water load less than that which would occur during the base flood.

- (b) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement or other structural damage due to the effects of wind and water load acting simultaneously on all building components (structural and non-structural).
- (c) If breakaway walls are utilized, such enclosed space shall be used solely for parking of vehicles, building access, or storage and not for human habitation.
- (d) Prior to construction, plans for any breakaway wall must be submitted for approval.

§ 6. FLOOD INSURANCE.

Flood insurance, in accordance with the National Flood Insurance Program of the United States Department of Housing and Urban Development, shall be required for all development in flood hazard areas.

§ 7. ACTION BY PLANNING BOARD.

The Planning Board shall act upon any site plan required by this ordinance or any application for a "permitted use" or "restricted use" permit within forty-five (45) days of the date of filing thereof or applying therefor or of the date of approval by the Department, if such approval is required; whichever is later, or within any other extension of time agreed to by the applicant. Failure of the Planning Board to act within such time limit shall be deemed an approval of any site plan submitted under this ordinance, or application for a "permitted use" permit or "restricted use" permit. Planning Board disapproval shall include written findings upon any site plan element, or "permitted use" application or "restricted use" application, found to be contrary to the provisions or intent of this ordinance.

§ 8. FEES.

In addition to any fees required for filing a site plan as set forth in other ordinances of the Town of Westfield, an applicant for a "permitted use" permit shall pay an additional fee of twenty-five dollars (\$ 25.00) and an applicant for a "restricted use" permit shall pay an additional fee of fifty dollars (\$50.00).

§ 9. ISSUANCE OF PERMITS.

No building permit shall be issued for any proposed construction unless the Planning Board shall have approved a site plan and any other data submitted in accordance with Section 4 and or a "permitted use" or "restricted use" permit, as the case may be, and such proposed construction complies fully with all the provisions of this ordinance. No certificate of occupancy shall be issued by the Construction Official unless proof has been submitted to him that all conditions of site plan approval and all other provisions of this ordinance have been fully complied with.

§ 10. APPEALS.

If any person shall be aggrieved by the action of the Planning Board, appeal in writing to the Town Council may be taken within ten (10) days after the date of such action. The Town Council shall fix and notify the appellant of a time and place for a public hearing on said appeal, and the appellant shall cause notice of such hearing to be published in the official newspaper of the municipality at least ten (10) days prior to the hearing. All parties in interest shall be afforded an opportunity to be heard thereat. After such hearing, the Town Council shall affirm or reverse the action of the Planning Board, stating its findings and reasons for its action and a written copy of such action shall be given to the appellant.

§ 11. SEPARABILITY.

If any section, subsection, provision, clause or portion of this ordinance is adjudged unconstitutional or invalid by a court of competent jurisdiction, such adjudication shall not affect the remaining sections, subsections, provisions, clauses or portions which shall be deemed severable therefrom.

§ 12. PRECEDENCE.

Should the provisions of this ordinance conflict with the provisions of any other ordinance of the Town of Westfield, the provisions of this ordinance shall take precedence.

§ 13. PENALTY FOR VIOLATIONS.

Any person who violates any provision of this ordinance shall be liable to a fine not exceeding two hundred dollars (\$200.00) or imprisonment for a term not exceeding ninety (90) days or both. Each day in which such violation continues shall constitute a separate violation of offense.

§ 14. EFFECTIVE DATE.

This ordinance shall take effect immediately upon final passage and publication as required by law.